



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,595	07/31/2001	Ashish K. Khandpur	56784US002	2530

32692 7590 09/22/2004

3M INNOVATIVE PROPERTIES COMPANY
PO BOX 33427
ST. PAUL, MN 55133-3427

EXAMINER

CHANG, VICTOR S

ART UNIT	PAPER NUMBER
----------	--------------

1771

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/919,595

Applicant(s)

KHANDPUR ET AL.

Examiner

Victor S Chang

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 13 and 15-21 is/are pending in the application.
- 4a) Of the above claim(s) 17-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 13, 15 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Introduction

1. The Examiner has carefully considered Applicants' declaration, amendment and remarks filed on 7/21/2004. Applicants' amendment to claim 1 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Rejections not maintained are withdrawn.

Rejections Based on Prior Art

4. Claims 1-10,13,15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gehlsen et al. (US 6103152), generally as set forth in section 4 of Office action dated 1/21/2004, together with the following additional reasoning.

It is noted that claim 1 has been amended to recite shear strength of the foamed pressure sensitive adhesive article as determined by ASTM 3654.

Applicants' argument "the present invention is far more than the discovery of an optimum range or level of crosslinking. On the contrary, the present invention does not use crosslinking at all to provide high temperature performance ... In the present invention, high temperature performance is accomplished ... via the formation of a network of microphase separated domains formed by the hard styrenic blocks being swollen by the polyarylene oxide ... thus good shear performance at high temperature can be achieved ... without the drawbacks of extensive crosslinking" (Remarks, pages

Art Unit: 1771

7-8, bridging paragraph) has been carefully considered, but is not persuasive. First, the Examiner notes that Applicants' statement "the present invention does not use crosslinking at all" is not commensurate with the recitation "a gel content of less than 25 percent", because a gel content greater than 0% is indicative of some degree of crosslinking to produce the gel. Second, the Examiner repeats (see page 2 of Office action dated 1/24/2004) that Gehlsen expressly teaches that "In some cases, e.g., where high cohesive strength and/or high modulus is needed, the foam may be crosslinked" (column 2, lines 5-7). As such, since Gehlsen expressly teaches that crosslinking is an optional method to improve the strength of the adhesive, it would have been obvious to one of ordinary skill in the adhesive art to suitably crosslink the adhesive article (i.e., to a suitable gel content), motivated by the desire to obtain required shear strength. Third, regarding the argument that "high temperature performance is accomplished via a network of microphase separated domains formed by the hard styrenic blocks being swollen by the polyarylene oxide", the Examiner repeats (see page 4 of Office action dated 1/24/2004) that it is old and well known that the alloy of styrenic block copolymer and polyphenylene oxide polymer provides improved high temperature performance, as evidenced by the state of the art Hansen (US 4104323) which expressly teaches that melt blending of a polyphenylene ether resin and a styrene-diene block copolymer forms adhesive compositions with improved high temperature performance characteristics.

With respect to Applicants' continued argument "Gehlsen does not teach or suggest that high cohesive strength and/or high modulus can be achieved without

Art Unit: 1771

crosslinking or even with "light" crosslinking, and Gehlsen fails to describe any means for obtaining these properties without extensive crosslinking" (Remarks, page 8, first full paragraph), the Examiner repeats that claim 1 is not limited to crosslinking free adhesive, as set forth above, and Applicants' argument assumes that an anticipation rejection, not an obviousness rejection, has been made. It should be noted that the properties of the instantly claimed invention are believed to be an obvious optimization over Gehlsen's teaching, and nowhere does Gehlsen teach that extensive crosslinking is required.

With respect to Mr. Khandpur's Declaration stating that "since extensive crosslinking is the conventional means for providing foamed articles with shear strength that is described by Gehlsen patent, it would require more than mere optimization of the methods taught by Gehlsen for one of ordinary skill in the art to obtain a pressure sensitive adhesive foam article having a high shear strength ... with little or no crosslinking" (Declaration, point 8; and Remarks, page 8, second full paragraph), the Examiner repeats that nowhere Gehlsen teaches that extensive crosslinking is required, as set forth above. Further, Gehlsen does expressly teach that crosslinking is an optional method to improve the strength of the adhesive, and it would have been obvious to one of ordinary skill in the adhesive art to suitably crosslink the adhesive article (i.e., to a suitable gel content), motivated by the desire to obtain a required shear strength, as set forth above.

With respect to Mr. Khandpur's Declaration contending that "In my view it would not have been obvious to one of ordinary skill in the art, having in hand the teachings of

Art Unit: 1771

the Gehlsen patent at the time the present invention was made, that foamed articles such as those claimed in the present application could have been prepared having high shear strength with little or no crosslinking. On the contrary, based on the teaching of Gehlsen, a skilled artisan would have considered necessary to extensively crosslink the foam in order to provide it with high shear strength" (Declaration, point 9), the Examiner repeats that a gel content of up to 25% in claim 1 fails to preclude the teachings of prior art by Gehlsen, and nowhere does Gehlsen teach that extensive crosslinking is required, as set forth above.

Finally, with respect to Applicant's statement "Applicants ... amend claim 1 to further define the shear strength of the foamed article", the Examiner notes that the newly recited "shear holding power" and testing conditions fail to distinguish the instant invention from the prior art, because Gehlsen expressly teach that crosslinking is an optional method to improve the strength of the adhesive, and it would have been obvious to one of ordinary skill in the adhesive art to suitably crosslink the adhesive article (i.e., to a suitable gel content), motivated by the desire to obtain a required shear strength, as set forth above.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S Chang whose telephone number is 571-272-1474. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

Application/Control Number: 09/919,595


Page 7

Art Unit: 1771

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vsc
Victor S Chang
Examiner
Art Unit 1771

9/15/2004


TERREL MORRIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700